ALTUSEN™
Enterprise KVM Solutions by ATEN

KN2116A/KN2132/KN4116/KN4132 KVM Over the NET™ Quick Start Guide

© Copyright 2010 ATEN® International Co., Ltd. www.aten.com
Altusen and the Altusen logo are trademarks of ATEN International Co., Ltd.
All rights reserved. All other trademarks are the property of their respective owners.

This product is RoHS compliant **PAPE-1214-M01G Printing Date: 04/2010**

Online Registration
International:
• http://support.aten.com
North America:
• http://www.aten-usa.com/product_registration

Technical Phone Support
International:
• 886-2-8692-6959
China:
• 86-10-5255-0110
Japan:
• 81-3-5323-7178
Korea:
• 82-2-467-6789
North America:
• 1-888-999-ATEN (ATEN TECH)
• 1-732-356-1703 (ATEN NJ)
United Kingdom:
• 44-8-4481-58923

1 Package Contents

1 KN2116A, KN2132, KN4116 or KN4132 KVM Over the NET™ KVM Switch
2 SA0142 Serial Adapter (RJ45-F to DB9-M; DTE to DCE)
1 Grounding Wire
1 Power Cord
1 Rack Mount Kit
1 Foot Pad Set (4 pcs.)
1 User Manual
1 Quick Start Guide

2-1 Requirements

Remote User Computers

Remote user computers (also referred to as client computers) are the ones the users log into the switch with from remote locations over the internet. The following equipment must be installed on these computers:

- For best results we recommend that the computers used to access the switch have at least a P III 1 GHz processor, with their screen resolution set to 1024 x 768.
- Browsers must support 128 bit SSL encryption.
- For best results, a network transfer speed of at least 512kbps is recommended.
- For the Windows Client AP, DirectX 8 must be present, and at least 90MB of memory must be available after installation.
- For the Java Client AP, the latest version of Sun's Java Runtime Environment (JRE) must be installed, and at least 145MB of memory must be available after installation.
- For the browser-based WinClient ActiveX Viewer, DirectX 8 must be present, and at least 150MB of memory must be available after installation.
- For the browser-based Java Applet Viewer the latest version of Sun's Java Runtime Environment (JRE) must be installed, and at least 205MB of memory must be available after installation.
- For the Log Server, you must have the Microsoft Jet OLEDB 4.0 or higher driver installed.

Servers

Servers are the computers connected to the switch via KVM Adapter Cables. The following equipment must be installed on these servers:

- A VGA, SVGA or Multisync port
- For USB KVM Adapter Cable Connections: a Type A USB port and USB host controller
- For PS/2 KVM Adapter Cable Connections: 6-pin mini-DIN keyboard and mouse ports

2-2 Requirements

Video

Only the following non-interlaced video signals are supported:

Resolution	Refresh Rates
640 x 480	60, 70, 72, 75, 85
720 x 400	70, 75
800 x 600	56, 60, 70, 72, 75, 85
1024 x 768	60, 70, 75, 85

Resolution	Refresh Rates
1152 x 864	60, 70, 75, 85
1152 x 900	66, 76
1280 x 1024	60, 70, 75, 85
1600 x 1200	60

KVM Adapter Cables

- Cat 5e / 6 cable is required to connect the KN2116A/KN2132/KN4116/KN4132 to the one of the KVM Adapter Cables.
- The following KVM Adapter Cables are required for use with the KN2116A/KN2132/KN4116/KN4132

Function	Module
Connect to devices with PS/2 ports	KA9120/KA7120
Connect to devices with USB ports	KA9170/KA7170
Connect to Sun Legacy Computers	KA9130/KA7130
Connect to serial based devices	KA9140 KA7140

Operating Systems

- Supported operating systems for remote user computers that log into the KN2116A / KN2132 / KN4116 / KN4132 include Windows 2000 and higher, and those capable of running Sun's Java Runtime Environment (JRE) 6, Update 3, or higher (Linux, Mac, Sun, etc.).
- Supported operating systems for servers that connected to the KN2116A / KN2132 / KN4116 / KN4132 are shown in the table, below:

OS		Version
Windows		2000 and higher
Linux	RedHat	7.1 and higher
	Fedora	Core 2 and higher
	SuSE	9.0 and higher
	Mandriva (Mandrake)	9.0 and higher
UNIX	AIX	4.3 and higher
	FreeBSD	4.2 and higher
	Sun	Solaris 8 and higher
Novell	Netware	5.0 and higher
Mac		OS 9 and higher
DOS		6.2 and higher

Browsers

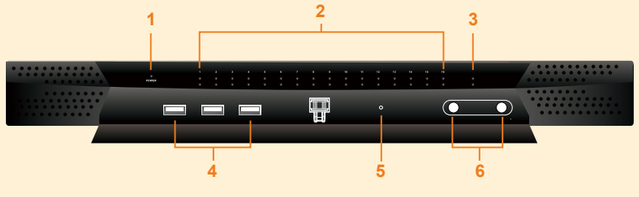
Supported browsers for users that log into the KN2116A / KN2132 / KN4116 / KN4132 include the following:

Browser	Version
IE	6 and higher
Firefox	1.5 and higher
Mozilla	1.7 and higher
Safari	2.0 and higher*
Opera	9.0 and higher
Netscape	8.1 and higher

* If Safari freezes when using that Snapshot feature you must upgrade to Mac OS 10.4.11 and Safari 3.04

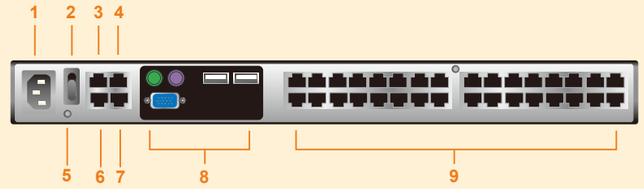
3 Hardware Review (Front View)

1. Power LED
2. Port LEDs
3. LAN LEDs
4. USB Ports
5. Reset Switch
6. Port Switching Buttons



4 Hardware Review (Rear View)

1. Power Socket
2. Power Switch
3. Secondary LAN Port
4. PON Port
5. Grounding Terminal
6. Primary LAN Port
7. Modem Port
8. Local Console Port(s)
9. KVM Ports



Note: The figure above shows the rear panel of a KN2132 / KN4132 with two blocks of 16 KVM ports (32 ports in total). The KN2116A / KN4116 differs in that it only has a single block of KVM ports (16 ports in total).

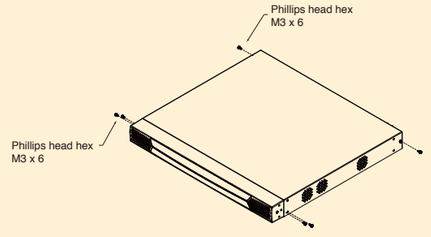
5 Hardware Installation 1

Rack Mounting

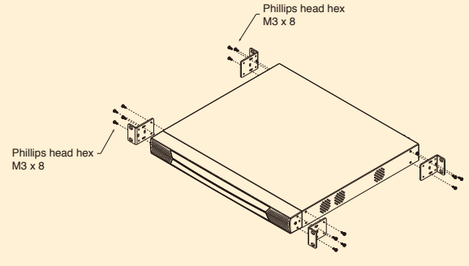
The KN2116A / KN2132 / KN4116 / KN4132 can be mounted in a 19" (1U) rack. The mounting brackets can screw into either the front or the back of the unit so that it can attach to the front or the back of the rack.

To mount the unit at the front of the rack, do the following:

1. Remove the two screws at the front or the rear, as shown in the diagram below:



2. Screw the mounting brackets into the sides of the unit at the front or the rear, as shown in the diagram below:



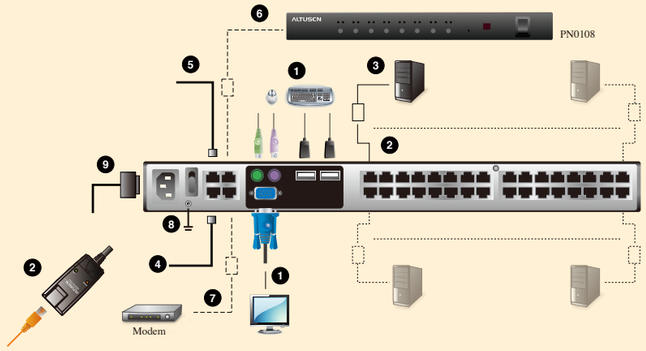
3. Slide the unit into the front or rear of the rack and secure it to the rack.

6 Hardware Installation 2

Refer to the connection diagrams for connection examples as you do the following:

1. Plug your Local Console's keyboard, monitor, and mouse into the unit's Console Ports. Each port is color coded and marked with an appropriate icon
   Note: 1. You can use any combination of keyboard and mouse connections. For example, you can use a PS/2 keyboard with a USB mouse.
   2. USB keyboards and mice can plug into the USB ports on the front panel, as well as into the ports in the console port section.
   3. The KN2116A / KN2132 / KN4116 / KN4132 does not support distances that exceed 20m between itself and the local monitor.
2. Use Cat. 5e/6 cable to connect any available KVM port to a KVM Adapter Cable that is appropriate for the server you are installing.
   Note: The distance between the KN2116A / KN2132 / KN4116 / KN4132 and the KVM Adapter Cable must not exceed 40m.
3. Plug the connectors on the KVM Adapter Cable into the appropriate ports of the server you are installing.
4. Plug a cable from the LAN or WAN into the KVM Over the NET™ switch primary network interface socket.
5. (Optional) Plug another cable from the LAN or WAN into the KVM Over the NET™ switch backup (secondary) network interface socket.
6. (Optional) Use Cat 5e/6 cable to connect the KVM Over the NET™ switch PON port to an SA0142 Adapter. Connect the Adapter to the PON IN port of a PN0108 Power Over the Net™ unit.
7. (Optional) Use Cat 5e/6 cable to connect the KVM Over the NET™ switch Modem port to an SA0142 Adapter. Connect the Adapter's serial connector to the modem's DB-9 port.
8. Use the grounding wire supplied with this package to ground the unit by connecting one end of the wire to the grounding terminal, and the other end of the wire to a suitable grounded object.
9. Plug the power cord(s) supplied with this package into the KVM Over the NET™ switch power socket, and then into an AC power source.

After the KN2116A / KN2132 / KN4116 / KN4132 is cabled up you can turn on the power. After it is powered up, you can turn on the servers.



7 Hardware Installation 3

Mouse DynaSync is only available for Windows and Mac (OS4.0 or higher). Systems connected to the KN2116A / KN2132 / KN4116 / KN4132 with a KA9170 and KA7170 KVM Adapter, and whose adapter attribute OS setting is configured for Win or Mac All other configurations must use manual mouse synchronization. These procedures are to be performed on the computers attached to the KN2116A / KN2132 / KN4116 / KN4132's ports - not on the computer you are using to access the KN2116A /KN2132 / KN4116 / KN4132.

Windows Systems:
Note: You must use the generic mouse driver supplied with Windows.
• XP / Server 2003 -- middle position; Enhance pointer precision: off
• 2000 / ME -- Mouse motion: middle position; Acceleration: off
• NT / 98 / 95 -- Mouse speed: slowest

Sun / Linux Systems:
Open a terminal session and issue the following command:
• Sun: xset m 1
• Linux: xset m 0

8 Administrator Setup

Once the KN2116A / KN2132 / KN4116 / KN4132 has been cabled up, the Super Administrator needs to set the unit up for user operation using the local console. When the local console has been connected up and the KN2116A / KN2132 / KN4116 / KN4132 turned on, a login prompt appears on the console monitor:

Since this is the first time you are logging in, use the default Username: administrator; and the default Password: password. For security purposes, use the User Management function to change these to a unique Username and Password

Select Device Management → Network to set up the switch for network operation.

• If you are only using one LAN but connect both ports in case the primary connection fails, check Redundant NIC; if you are using the secondary LAN port for a second IP address, leave Redundant NIC unchecked:
• For dynamic IP address assignment, select ***Obtain an IP address automatically***.
• To specify a fixed IP address, select ***Set IP address manually***, and fill in the IP address.
• For automatic DNS Server address assignment, select ***Obtain DNS Server address automatically***.
• To specify the DNS Server address manually, select ***Use the following DNS Server***, and fill in the addresses for the Primary and Alternate DNS servers.
• If you are using the secondary LAN port for a second IP address, drop down the list under Redundant NIC and select Network Adapter 2 and set the IP and DNS addresses for it.

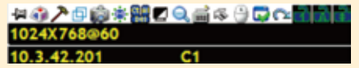
To change the default username and password → Select User Management → administrator → Modifiy to change the default Super Administrator username and password to something unique.

To add users, select users in the left panel at the user management page, then click Add the bottom of the main panel.

9 Operation

After you have successfully logged in, the KN2116A /KN2132 / KN4116 / KN4132 Main Screen appears with the Port Access page displayed.

The Control Panel
The KN2116A /KN2132 / KN4116 / KN4132 has a hidden control panel, located at the bottom center of the screen. The panel becomes visible when the mouse pointer moves over it.



The Control Panel consists of an icon bar at the top, with two text bars below it. The upper text bar shows the remote display's video resolution; the lower bar shows the remote IP address at the left and the bus that the logged in user is on at the center. Information about the functions that the Control Panel items perform appears when you move the mouse over them.

The functions that the icons perform are described in the table below:

This is a toggle. Click to make the Control Panel persistent – i.e., it always displays on top of other screen elements. Click again to have it display normally.	Click to bring up the on-screen keyboard
Click to bring up the Macros dialog box	Click to select the mouse pointer type.
Click to bring up the Video Options dialog box. Right-click to perform a quick Auto Sync	Click to toggle Automatic or Manual mouse sync. • When the selection is Automatic, a green √ appears on the icon. • When the selection is Manual, a red X appears on the icon.
Click to perform a video and mouse autosync operation. It is the same as clicking the Auto-sync button in the Video Options dialog	Click to display a dropdown list of User macros. Access and run macros more conveniently rather than using the Macros dialog box
Toggles the display between Full Screen Mode and Windowed Mode.	Click to bring up the Control Panel Configuration dialog box.
Click to take a snapshot (screen capture) of the remote display.	Click to exit the viewer. • Exiting from a viewer accessed session brings you back to the web browser Main Page. • Exiting from a WinClient AP session logs you out and brings you back to the login dialog box. • Exiting from a Java Client AP session logs you out and closes the Java program.
Click to bring up the Message Board.	
Click to send a Ctrl+Alt+Del signal to the remote system.	These Lock Key LEDs show the Num Lock, Caps Lock, and Scroll Lock status of the remote computer. Click on the icon to toggle the status.
Click to toggle the remote display between color and gray scale views.	
Click to zoom the remote display window.	

Port Access
Click on a port in the left panel to switch to that port. The OSD provides a toolbar to help you control the KN2116A /KN2132 / KN4116 / KN4132 from within the captured port. To bring up the toolbar, tap the OSD Hotkey (Scroll Lock), twice. The toolbar appears at the upper left corner of the screen.

• Information about the functions that the Toolbar items perform appears when you move the mouse over them.
• To dismiss the toolbar and bring back the Port Access page, tap the OSD Hotkey once.

10 Specifications

Function		KN2116A	KN2132	KN4116	KN4132
Computer Connections	Direct	16	32	16	32
	Max	256 (via Cascade)	512 (via Cascade)	256 (via Cascade)	512 (via Cascade)
Console Connections	Local	1	1	1	1
	Remote	2	2	4	4
Port Selection		Pushbutton/ GUI/ Hotkey			
Connectors	Console Port – Keyboard	1 x 6-pin Mini-DIN , 1 x USB Type A			
	Console Port – Video	1 x HDB-15			
	Console Port – Mouse	1 x 6-pin Mini-DIN, 1 x USB Type A			
	KVM Port	16 x RJ-45	32 x RJ-45	16 x RJ-45	32 x RJ-45
	Power	1 x 3-prong AC socket			
	LAN	2 x RJ-45			
	PON	1 x RJ-45			
	Modem	1 x RJ-45			
	USB	3 x USB			
Switches		Reset, Power, Port Selection			
LEDs		On Line, Selected, Power, Link 10 / 100 / 1000 Mbps			
Emulation	Keyboard/Mouse	PS/2 / USB (PC, Mac, Sun) / Serial			
Video		1600 x 1200 @ 60Hz; DDC2B			
Scan Interval		1 – 255 Seconds			
I/P Rating		100-240VAC; 50-60Hz; 1.0A			
Power Consumption		110V/33.00W 230V/33.80W	110V/33.40W 230V/34.20W	110V/39.60W 230V/40.00W	110V/45.80W 230V/46.30W
Environment	Operating Temp.	0-50°C			
	Storage Temp.	-20—60°C			
	Humidity	0—80% RH, Non-condensing			
Physical Properties	Housing	Metal			
	Weight	5.46 kg	5.59 kg	5.52 kg	5.63 kg
	Dimensions (L x W x H)	43.36 x 41.35 x 4.40 cm(19" 1U)			